

HALLIBURTON

iCem[®] Service

Bonanza Creek

STATE PRONGHORN FEDERAL D14-X44-30HNB PRODUCTION

Job Date: Tuesday, December 07, 2021

Sincerely,

Meghan Van Zyl

Legal Notice

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Table of Contents

Cementing Job Summary 4

 Executive Summary 4

Real-Time Job Summary 7

 Job Event Log..... 7

Attachments..... 9

 Real Time iCem Job Chart 9

1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **State Pronghorn Fed D14-X44-30HNB cement Production** casing job. A pre-job safety meeting was held before the job where details of the job were discussed, potential safety hazards were reviewed, and environmental compliance procedures were outlined.

Approximately 54 bbls of cement were returned to surface.

Halliburton maintains a continuous quality improvement process and appreciates any comments or suggestions that you may have. Halliburton again thanks you for the opportunity to perform service work on this well. We hope to be your solutions provider for future projects.

Respectfully,

Halliburton Fort Lupton

Sold To #:		Ship To #: 9058990		Quote #:		Sales Order #: 0907549808				
Customer: BONANZA CREEK					Customer Rep: Todd Stephens					
Well Name: STATE PRONGHORN FEDERAL			Well #: D14-X44-30HNB			API/UWI #: 05-123-51319-00				
Field: WATTENBERG		City (SAP): KERSEY		County/Parish: WELD			State: COLORADO			
Legal Description: 30-5N-61W-2213FSL-610FWL										
Contractor: PATTERSON-UTI ENERGY					Rig/Platform Name/Num: PATTERSON 345					
Job BOM: 7523 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX41066					Srv Supervisor: Bradley Hinkle					
Job										
Formation Name										
Formation Depth (MD)		Top				Bottom				
Form Type						BHST				
Job depth MD		11347ft				Job Depth TVD				
Water Depth						Wk Ht Above Floor				
Perforation Depth (MD)		From				To				
Well Data										
Description	New / Used	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
Casing		9.625	8.921	36			0	1617	0	1617
Casing		5.5	4.778	20			0	11303	0	6063
Open Hole Section			8.5				1617	11347	1617	6063
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	5.5					Top Plug	5.5	1		
Float Shoe	5.5	1		11325		Bottom Plug	5.5	1		
Float Collar	5.5	1		11320		SSR plug set	5.5		HES	
Insert Float	5.5					Plug Container	5.5		HES	
Stage Tool	5.5					Centralizers	5.5		HES	
Fluid Data										
Stage/Plug #: 1										
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft³/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
1	Tuned Prime	TUNED PRIME CEMENT SPACER SYS	50	bbl	11.5	3.74	23.63	5		
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft³/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	

2	Cap	ELASTICEM	555	sack	13	1.66	8.3	9		
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft³/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
3	Lead	ISOBOND	530	sack	13	1.55	7.22	9		
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft³/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
4	Tail	ELASTICEM	775	sack	13.2	1.59	7.76	9		
0.65 %		HR-5, 50 LB SK (100005050)								
7.76 Gal		FRESH WATER								
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft³/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
5	Displacement	Fresh Water	251	bbl	8.33			10		
Cement Left In Pipe		Amount	5 ft		Reason			Shoe Joint		
Mix Water:		pH 7	Mix Water Chloride:			0 ppm		Mix Water Temperature:		70 °F
Cement Temperature:		## °F °C	Plug Displaced by:			## lb/gal kg/m ³ XXXX		Disp. Temperature:		## °F °C
Plug Bumped?		Yes	Bump Pressure:			2111 psi		Floats Held?		Yes
Cement Returns:		54 bbl	Returns Density:			## lb/gal kg/m ³		Returns Temperature:		## °F °C
Comment 50 bbls spacer and 54 bbls cement to surface. Estimated top of lead cement at 2371 feet. Estimated top of tail cement at 5957 feet.										

2.0 Real-Time Job Summary

2.1 Job Event Log

Seq No.	Activity	Graph Label	Date	Time	Pump A Pressure (psi)	Dwnhole Density (ppg)	Cmb Pump Rate (bbl/min)	Cmb Stg Total (bbl)	Comments
1	Call Out	Call Out	12/7/2021	03:30:00					Crew called for an on location time of 0930. Crew was Kyle Bath, Jared Camper, David Womack and Jeffrey Miller. Bradley Hinkle and Cody Stalcar relieved Kyle and Jared at 1030.
2	Depart Shop for Location	Depart Shop for Location	12/7/2021	07:00:00					Pre-journey safety meeting.
3	Arrive at Location from Service Center	Arrive at Location from Service Center	12/7/2021	08:30:00					Arrive on location and perform a site assessment and pre-rig up safety meeting. Approx 3,000 feet of casing to run.
4	Other	Job Numbers/Water Test	12/7/2021	10:30:00					TD: 11347 TP: 11303 FC: 11320 - 5.5" 20 # casing inside a 8.5" OH. TVD: 6063. 9.625" 36# casing set at 1617 feet. WF: 10# OBM. Water Test: Temp: 70 pH: 7 Chlorides: 0
5	Safety Meeting - Pre Job	Safety Meeting - Pre Job	12/7/2021	13:30:00	0.06	8.35	0.00	0.00	Pre-job safety meeting with all personnel on location.
6	Drop Bottom Plug	Drop Bottom Plug	12/7/2021	13:50:33	-0.95	8.49	0.00	0.00	Bottom plug loaded prior to filling lines. Witnessed by company reps.
7	Start Job	Start Job	12/7/2021	13:50:35	-0.96	8.49	0.00	0.00	Fill lines with 3 bbls fresh water.
8	Test Lines	Test Lines	12/7/2021	13:53:34	50.71	8.58	0.00	2.96	Pressure test lines to 4700 psi with a 500 psi electronic kick-out test.

9	Pump Spacer 1	Pump Spacer 1	12/7/2021	13:58:25	3.39	8.54	0.00	0.00	Pump 50 bbls Tuned Prime Spacer mixed at 11.5 ppg. Pump was having difficulty mixing to density, slowed rate and lined out. Density verified by pressurized scales.
10	Pump Cap Cement	Pump Cap Cement	12/7/2021	14:13:32	215.30	12.36	4.30	0.04	Pump 164 bbls (555 sacks, 1.66 yield, 8.3 gal/sk) ElastiCem mixed at 13 ppg. Density verified by pressurized scales.
11	Pump Lead Cement	Pump Lead Cement	12/7/2021	14:33:58	676.31	12.88	9.01	0.15	Pump 146 bbls (530 sacks, 1.55 yield, 7.22 gal/sk) IsoBond w/ dry latex mixed at 13 ppg. Density verified by pressurized scales.
12	Pump Tail Cement	Pump Tail Cement	12/7/2021	14:50:37	820.74	13.19	9.01	0.08	
13	Shutdown	Shutdown	12/7/2021	15:16:26	106.69	10.92	0.00	221.44	
14	Drop Top Plug	Drop Top Plug	12/7/2021	15:26:57	10.45	8.66	0.00	239.48	
15	Pump Displacement	Pump Displacement	12/7/2021	15:26:59	10.41	8.66	0.00	0.00	Pump 251 bbls fresh water - first 20 bbls with MMCR added. Good returns throughout. 50 bbls spacer and 54 bbls cement to surface. Estimated top of lead cement at 2371 feet. Estimated top of tail cement at 5957 feet.
16	Bump Plug	Bump Plug	12/7/2021	15:54:41	2695.99	8.00	0.00	249.39	Bump plug at 2111 psi and increase to 2700 psi. Held to verify pressure leveled off and wasn't being lost anywhere.
17	Standby Other	Check Floats	12/7/2021	15:57:09	2226.31	8.00	0.00	249.39	Floats held. 2.5 bbls back.
18	End Job	End Job	12/7/2021	15:57:47	30.38	7.87	0.00	249.39	Flush water through stack until clean.
19	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	12/7/2021	16:00:00	3.14	7.93	0.00	249.39	Pre-rig down safety meeting.
20	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	12/7/2021	17:15:00					Pre-journey safety meeting.

3.0 Attachments

3.1 Real Time iCem Job Chart

